

## OCCLUSION-RESISTANT CATHETER

ABSTRACT

A catheter comprises an elongated tube having an interior defined by a sidewall having openings. At least a portion of the catheter is spirally formed into a corkscrew pattern or has an inwardly spiraling portion with at least one opening coincident therewith. Additionally or alternatively, the catheter comprises a septum that divides the interior into at least first and second lumens. The first and second lumens may form a double helix in a portion of the catheter coincident with the plurality of openings or along the entire length of the catheter. Methods of manufacturing the catheters involve extruding the portion of the catheter having the openings, making this portion separately then attaching it to another catheter, or heating and deforming a portion of a catheter to form a tip portion. The catheter can be used for hemodialysis by drawing blood through one lumen and returning it through another.